

## CPP 程式設計題

命題者：ZZY

題目名稱(中文/英文)：Design Month Class

主要測試觀念：

### Basics

- ☒ C++ BASICS 1
- ☐ FLOW OF CONTROL
- ☒ FUNCTION BASICS
- ☐ PARAMETERS AND OVERLOADING
- ☐ ARRAYS
- ☒ STRUCTURES AND CLASSES
- ☒ CONSTRUCTORS AND OTHER TOOLS
- ☐ OPERATOR OVERLOADING, FRIENDS, AND REFERENCES
- ☐ STRINGS
- ☐ POINTERS AND DYNAMIC ARRAYS

### Functions

- ☐ SEPARATE COMPILATION AND NAMESPACES
- ☐ STREAMS AND FILE I/O
- ☐ RECURSION
- ☐ INHERITANCE
- ☐ POLYMORPHISM AND VIRTUAL FUNCTIONS
- ☐ TEMPLATES
- ☐ LINKED DATA STRUCTURES
- ☐ EXCEPTION HANDLING
- ☐ STANDARD TEMPLATE LIBRARY
- ☐ PATTERNS AND UML

**題目說明：** Define a class called Month that is an abstract data type for a month. Your class will have one member variable of type int to represent a month (1 for January, 2 for February, and so forth). Include all the following member functions: a constructor to set the month using the first three letters in the name of the month as three arguments, a constructor to set the month using an integer as an argument (1 for January, 2 for February, and so forth), a default constructor, an input function name **inputInt** that reads the month as an integer, an input function name **inputStr** that reads the month as the first three letters in the name of the month, an output function name **outputInt** that output the month as an integer, an output function name **outputStr** that outputs the month as the first three letters in the name of the month, and a member function name **nextMonth** that returns the next month as a value of type Month. Embed your class definition in a test program.

Note that if month out of range, set the month to January.

**輸入說明：** Replace the main from input-main.cpp and enter the test data in input.txt。

**輸出說明：** See the Sample Output。

**I/O 範例：**

	Sample Input	Sample Output
第一組測資與輸出	input-main1.cpp  input1.txt	Month1 = 1 Jan Month2 = 2 Feb Month3 = 3 Mar Month4 = 4 Apr Month5 = 5 May Month6 = 6 Jun

第二組	input-main2.cpp  input2.txt	Month1 = 1 Jan Month2 = 2 Feb Month3 = 1 Jan Month4 = 3 Mar Month5 = 1 Jan Month6 = 12 Dec Month7 = 10 Oct Month8 = 1 Jan Month8 = 2 Feb Month8 = 3 Mar Month8 = 4 Apr Month8 = 5 May Month8 = 6 Jun Month8 = 7 Jul Month8 = 8 Aug Month8 = 9 Sep Month8 = 10 Oct Month8 = 11 Nov Month8 = 12 Dec Month8 = 1 Jan
<b>附屬資料：</b> <input checked="" type="checkbox"/> 解答程式：DesignMonthClass.cpp(檔名) <input checked="" type="checkbox"/> 測試資料：input-main1.cpp, input1.txt, output1.txt, input-main2.cpp, input2.txt, output2.txt		
<input checked="" type="checkbox"/> 易，僅需用到基礎程式設計語法與結構 <input type="checkbox"/> 中，需用到多項程式設計語法與結構 <input type="checkbox"/> 難，需用到多項程式結構或較為複雜之資料型態或結構		
<b>解題時間：30 分鐘。</b>		
<b>其他註記：</b>		